AMSAT News Service Weekly Bulletins
Issue: ANS-088
Date: 1992-03-28
Sources: amsat-ans-1992-ans-088.01.txt

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| Relayed from AMSAT BBS NETWORK |
| N8EMR's Ham BBS, 614-895-2553 |
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SB SAT @ AMSAT $ANS-088.01
LATEST STS-45 KEPLERIANS

HR AMSAT NEWS SERVICE BULLETIN 088.01 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.01
TO ALL RADIO AMATEURS BT

Revised STS-45 Elements

The following represents the latest Keplerian data for STS-45 as generated
by JSC ARC member Gil Carman (WA5NOM).

STS-45
1 21915U 92 15 A 92 87.49910823 .00126000 00000-0 36800-3 0 111
2 21915 56.9934 267.0131 0006662 303.6246 56.4221 15.92591437 488

Satellite: STS-45
Catalog number: 21915
Epoch time: 92087.49910823 -----> (27 MAR 92 11:58:42.95 UTC)
Element set: JSC-011
Inclination: 56.9934 deg
RA of node: 267.0131 deg Space Shuttle Flight STS-45
Eccentricity: .0006662 SGP4 Keplerian Elements
Arg of perigee: 303.6246 deg from NASA flight Day 3 vector
Mean anomaly: 56.4221 deg
Mean motion: 15.92591437 rev/day W5RRR
Decay rate: 1.26000e-03 rev/day^2 NASA Johnson Space Center
Epoch rev: 48

Note: Predictions using element set JSC-010 are within 10 seconds
of JSC-011 through March 29.

[ANS would like to thank Frank H. Bauer (KA3HDO), AMSAT V.P. for Manned
Space Programs and Gil Carman (WA5NOM) for these revised elements for
STS-45.]

/EX
SB SAT @ AMSAT $ANS-088.02
AO-13 OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 088.02 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.02
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AMSAT-NA Operations Net Schedule

AMSAT Operations Nets are planned for the following times. Mode B Nets
are conducted on AO-13 on a downlink frequency of 145.950 MHz and Mode J/L
Nets on a downlink frequency of 435.970 MHz.

Date	UTC	Mode	Phs	NCS	Alt
12-Apr-92	0200	B	68	WB6LLO	W9ODI

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26-Apr-92       0050   B        137     WA5ZIB  WB6LLO
 3-May-92       0200   B         85     W9ODI   N7NQM
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Guest commentators are planned. Join the Net if you have questions.
In the unlikely event that either the Net Control Station (NCS) or
the alternate do not call up frequency, any participant is invited to
act as NCS.

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Slow Scan Television on AO-13

Mode B downlink of 145.925 MHz at MA 135 on UTC Sundays. Also try
Mode J downlink of 435.980 MHz at MA 135 on UTC Saturdays.

The AMSAT 20M "pre-net-warm-up" at 18:00Z on Sundays (14.282 USB) is also
suggested as a meeting place to arrange individual schedules.

/EX
SB SAT @ AMSAT $ANS-088.03
SPRING AO-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 088.03 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992   BID:$ANS-088.03
TO ALL RADIO AMATEURS BT

AO-13 Spring Schedule Announced

The new spring schedule for AO-13 is announced as the following:

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QST de G3RUH/DB2OS 16Jan92 ** AO-13 Transponder Schedule **
experimental schedule Mar 16 - Jun 08 in response to feedback.
Mode-B  : MA 000 to MA 100 ! Mode-JL ON Mon, Wed   !
Mode-JL : MA 100 to MA 120 ! Fri and Sat UTC only. ! Blon/Blat
Mode-LS : MA 120 to MA 135 ! S Beacon on "L" days  !  180/0
Mode-JL : MA 135 to MA 150 ! S Transp on "B" days  +-----------
Mode-B  : MA 150 to MA 256 ! See AMSAT-Journals and Packet
Omnis   : MA 240 to MA 030 ! Radio Bulletins for full details.
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Mode-B and Mode-L Days Explanation From DB2OS

By listening to the transponder (Yes, we do!) we observed that the
transponder switching between B & L days (UTC only!) is not fully under-
stood. I hope the following explanation will help.

The satellite software looks every MA count into the schedule table and
compares the numbers. If there is an equal MA count, then the transponder
switching will be executed. If the command includes Mode-L switching, then
it will be first checked to see if it is a Mode-L day. If not, then this
instruction will be ignored and not executed.

This all means that Transponder Schedule switches only occur at fixed MA
counts. On Mode-B days (UTC) all switches which include Mode-L transponder
will be not executed.

In practice it may happen that the day changes between Mode-B and Mode-L
transponder switching. Let's assume we switch to Mode-JL at MA 100, to
Mode-LS at MA 120, to Mode-JL at MA 135 and back to Mode-B at MA 150. If
we have a Mode-B day and we go over into a Mode-L day at 00:00 UTC and if we
are at MA 110, then the Mode-B transponder will be in use until the next
Mode-L instruction which occurs at MA 120 (Mode-LS). There will be no
switch at MA 110 to Mode-L. In this case the L schedule will not start at
MA 100, but at MA 120!!

But, if we are at 00:00 UTC at the begin of a Mode-B day and we have Mode-L running at MA 110 (because we switched to Mode-L on MA100 on the previous Mode-L day!) then the transponder will stay in Mode-L operation until MA 150, when a new Mode-B instruction follows.

This may sound a little bit confusing, but in fact it is very simple. Take the transponder schedule of AO-13. All what you need to know is that any transponder switch will only occur at the given MA count. All transponder switches which include Mode-L will only be executed on a Mode-L day, otherwise the last transponder switch will be in effect. Indeed, every Satellite Day will begin at 00:00 UTC!

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AO-10 is currently available for Mode B operation when it is view of your QTH. PLEASE DO NOT attempt to use AO-10 if you hear the beacon or the transponder signals FMing.

/EX
SB SAT @ AMSAT $ANS-088.04
AO-16 EXPERIMENTER'S DAY

HR AMSAT NEWS SERVICE BULLETIN 088.04 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.04
TO ALL RADIO AMATEURS BT

AO-16 Experimenter's Day Schedule

The AO-16 Command Team has announced the following PACSAT Experimenter's Day schedule for April and May:

DATE	START TIME	END TIME	MODE
01 Apr	2220 UTC - 31 Mar	2155 UTC - 01 Apr	RCO
08 Apr	2045 UTC - 07 Apr	2152 UTC - 08 Mar	RCO/RELOAD
15 Apr	0505 UTC - 15 Apr	0432 UTC - 16 Apr	RCO
22 Apr	0320 UTC - 22 Apr	0250 UTC - 23 Apr	RCO
29 Apr	0640 UTC - 29 Apr	0610 UTC - 30 Apr	RCO
06 May	2035 UTC - 05 May	2145 UTC - 06 May	RCO
13 May	0455 UTC - 13 May	0425 UTC - 14 May	RCO
20 May	0310 UTC - 20 May	0245 UTC - 21 May	RCO
27 May	0625 UTC - 27 May	0600 UTC - 28 May	RCO

RCO: Raised Cosine Only, No S-Band.

QRP operations are encouraged on Experimenter's Day. Uplink power should be limited to 20 watts EIRP. If you are using your AO-10/13 beams, this means you must crank your power back to about as low as it will probably go, no more than 2 watts. And don't forget to turn off your amplifier!

While Experimenter's Day operations are scheduled to be conducted weekly, users are reminded that these operations may be shortened or canceled to allow uploading of improved spacecraft software. Watch for bulletins on the AO-16 BBS and/or the telemetry text frame for changes to the schedule.

It is currently planned to SHUT the BBS on the 8 April for several orbits to reload a portion of the spacecraft software to clear a stuck user. During this reload, the raised cosine transmitter will be on but the BBS will NOT be available. Watch the telemetry text message for BBS availability and consult future ANS bulletins for updates/changes to this schedule.

[ANS thanks Bruce Rahn (WB9ANQ) for this bulletin item.]

/EX
SB SAT @ AMSAT $ANS-088.05
W9JUV REPLACES KO5I

HR AMSAT NEWS SERVICE BULLETIN 088.05 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.05
TO ALL RADIO AMATEURS BT

W9JUV Takes The Helm On Phase 3D Fundraising Effort

With Doug Loughmiller (KO5I) still on the sick list, AMSAT President Bill Tynan (W3XO) was forced to take action to obtain temporary help in the Phase 3D fundraising effort. Answering the call for a pitch hitter for Doug was AMSAT Life member Joe Schroeder (W9JUV) of Glenview, Illinois. Joe will be assisting AMSAT for a limited period, until Doug's doctors give him the OK to return to his previously full schedule. W9JUV needs no introduction to many amateurs as he became well known as the editor of Ham Radio Report back in the 70's. He has extensive experience in the field of public relations and promotion and is an accomplished writer. President Tynan told the AMSAT News Service (ANS) that he is confident that Joe Schroeder will to be of great assistance in keeping the Phase 3D fundraising campaign, initiated by Doug, on track.

Bill also noted that he has no late news on the condition of Dough Loughmiller. Doug saw a new specialist the week of March 23, who conducted numerous tests. It is hoped that these tests will enable Doug's doctors to come up with a definitive diagnoses soon.

Keep tuned to ANS.

/EX
SB SAT @ AMSAT $ANS-088.06
STS-45 SAREX UPDATE: PART I

HR AMSAT NEWS SERVICE BULLETIN 088.06 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.06
TO ALL RADIO AMATEURS BT

KA3HDO Provides STS-45 SAREX Mission Status Report 03/28/92: Part I

The Shuttle Amateur Radio Experiment (SAREX), flying on STS-45, has been an overwhelming success thus far. Shuttle amateur radio operators Dave Leetsma (N5WQC), Brian Duffy (N5WQW), Kathy Sullivan (N5YYV), and Dirk Frimout (ON1AFD), have given a new meaning to the phrase "the ultimate DX-pedition" by making numerous general QSO contacts, answering questions from students throughout the world, and talking to their families via amateur radio. Moreover, the national and international publicity from SAREX during this mission has been probably the most ever generated for amateur radio during a single event.

Fifteen of the 17 scheduled school group contacts have been successfully completed. The last two to be completed soon. Literally thousands of students, teachers and family members have participated in the school contacts. Of these, over 50 to 75 students have asked excellent questions to the astronauts on the space shuttle. Contacts were made with schools in the following countries: Wales, Norway, Alberta Canada, Brazil, Spain, Belgium and England. Contacts made in the U.S. and it's territories included school groups from San Diego, California (2 schools), Maynard, Massachusetts, Orangeburg, South Carolina, Seabrook, Texas, Longwood, Florida (an 11 school link-up), Saipan, Marianas, and San Jose, California.

The Shuttle crew have demonstrated their multi-lingual abilities during the school contacts. Payload specialist Dirk Frimout answered his questions

from the students at the Belgian Space Camp in French and Dutch. Mission specialist Kathy Sullivan used some of her Norwegian when she spoke to the students at the school in Holden, Norway.

[The AMSAT News Service (ANS) would like to thank Frank H. Bauer (KA3HDO), AMSAT V.P. for Manned Space Programs, for this ANS bulletin item.]

/EX
SB SAT @ AMSAT $ANS-088.07
STS-45 SAREX UPDATE: PART II

HR AMSAT NEWS SERVICE BULLETIN 088.07 FROM AMSAT HQ
SILVER SPRING, MD MARCH 28, 1992 BID:$ANS-088.07
TO ALL RADIO AMATEURS BT

KA3HDO Provides STS-45 SAREX Mission Status Report 03/28/92: Part II

The biggest surprise of the mission occurred during the contact at the Ed White elementary school in Seabrook, Texas. Astronaut Brian Duffy's children Shannon and Shaun, were two of six students who asked questions to Duffy. Shaun, 11, had secretly worked on his amateur ticket and passed the exam the night before. At his turn on the mike, young Shaun asked "How would you react if I told you that I passed my ham radio novice and technician test?" His father was floored, stating "is that right? When did you do that?"

Numerous radio and TV stations and newspapers have covered the SAREX activities throughout the world. Many of the foreign countries had their national radio and TV stations and their newspapers cover the astronaut communications with the students. In the U.S., the most notable press coverage was a live and taped interview with the students at the Ed White Elementary School which aired on CBS morning news with Connie Chung on 3/27. The Shuttle crew have periodically kept the ham community informed of their general QSO results through the NASA select mission audio. The SAREX team has learned of numerous contacts made near Washington D.C., Los Angeles, Hawaii, Texas, Canada, Australia, throughout the South Pacific and in Europe. They have confirmed working stations on all continents except Africa and Antarctica. With the school groups now almost completely out of the way, a significant increase in general QSOs is expected.

Several Shuttle/MIR contacts have been attempted with no luck so far. With the recently launched cosmonauts just getting settled into their new environs, it is understandable that they have been too busy to make a contact. Crews in the U.S and in the Soviet Republic are making a concerted effort to support the first ever Shuttle/MIR amateur radio contact.

[The AMSAT News Service (ANS) would like to thank Frank H. Bauer (KA3HDO), AMSAT V.P. for Manned Space Programs, for this ANS bulletin item.]

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